

Effects of television commercial repetition

[Media](#), [Television](#)



Journal of Consumer Research, Inc. The Effects of Television Commercial Repetition on Cognitive Response and Message Acceptance Author(s): George E. Belch Reviewed work(s): Source: Journal of Consumer Research, Vol. 9, No. 1 (Jun. , 1982), pp. 56-65 Published by: The University of Chicago Press Stable URL: <http://www.jstor.org/stable/2488937> . Accessed: 17/08/2012 06: 48 Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at . <http://www.jstor.org/page/info/about/policies/terms.jsp> .

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact org. . The University of Chicago Press and Journal of Consumer Research, Inc. are collaborating with JSTOR to digitize, preserve and extend access to Journal of Consumer Research. <http://www.jstor.org> The Television Commercial Repetition on Cognitive Response and Message Acceptance Effects of

GEORGE E. BELCH* The cognitive effects of advertising repetition are examined by considering the impact of three levels of TV commercial exposure within a one-hour program. Attitudes and purchase intentions were not affected by message repetition, although cognitive responses became more negative as exposure frequency increased. The relationship between cognitive responses and the message acceptance measures was relatively constant across the three exposure levels. effects of repeated exposure to a

persuasive communication have long been of interest to social psychologists and marketers.

However, research concerning the effects of persuasive message repetition on cognitive processes has been limited in both social psychology and marketing. In social psychology, much of the repetition research has been performed in contexts that do not involve communication. For example, Zajonc's (1968) theory of mere exposure suggests that a person's attitude toward a stimulus is positively related to exposure frequency (an effect Zajonc attributed to the pleasantness associated with hearing an increasingly familiar stimulus).

However, mere exposure theory may have limited relevance to the attitudinal effects of persuasive message repetition, as this model applies primarily to simple nonassociative stimuli, such as nonsense syllables or Turkish alphabet characters. Persuasive messages tend to be more complex stimuli and, in the case of advertising messages, the focus is generally on objects or ideas presented in the message rather than on the advertisement itself. With the exception of a study by Cacioppo and Petty (1979), the cognitive and affective effects of repeated exposure to persuasive communications have generated surprisingly little research in social psychology.

Attempts to determine the effects of advertising message repetition have appeared frequently in the marketing literature (Craig, Sternthal, and Leavitt 1976; Grass and Wal- The lace 1969; Mitchell and Olson 1977; Ray and Sawyer 1971; Sawyer 1973; Silk and Vavra 1974; Winter 1973). However, most research into the effects of advertising repetition has focused

<https://assignbuster.com/effects-of-television-commercial-repetition/>

primarily on outcome measures such as recall, attitude, and purchase intention, rather than considering the underlying processes that might shape and determine reaction to an advertising message following multiple exposures.

While knowledge of the repetition function for a persuasive message with respect to these outcome variables is important, the cognitive effects of message repetition must also be considered if insight is to be gained in understanding a recipient's reaction to a message following multiple exposures. The purpose of this investigation is to study the effects of repeated exposure to a persuasive communication by examining the impact of television commercial repetition on cognitive processing.

Cognitive response measures (Greenwald 1968; Petty, Ostrom, and Brock 1981; Wright 1973) as well as traditional outcome measures such as recall, attitude, and purchase intention are used to examine the effects of multiple message exposures on recipients. This study also examines changes in the relationship of cognitive response mediators to measures of message acceptance resulting from multiple exposures to a commercial message.

RELEVANT LITERATURE *George E. Belch is Assistant Professor of Marketing, College of Business Administration, San Diego State University, San Diego, CA 92182.

The author wishes to acknowledge the financial support provided by a doctoral dissertation grant from the American Marketing Association and by research grants from the Marketing Science Institute and the University of California, Los Angeles. Appreciation is also expressed to Rich Lutz and James Bettman for their comments on an earlier version of this manuscript and to <https://assignbuster.com/effects-of-television-commercial-repetition/>

two anonymous reviewers for their insightful comments and recommendations. The effects of advertising repetition on outcome measures such as attitude and purchase intention have been examined in a number of studies.

Winter (1973) found that exposure to the commercials decreased the distance between attitudes toward the advertised brand and the ideal brand. However, diminishing returns were found, since the greatest amount of attitude change occurred during the first two exposures. Also, exposure had a significant effect only on individuals initially unfamiliar with the advertised brand. *JOURNAL OF CONSUMER RESEARCH** Vol. 9 0 June 1982 EFFECTS OF TV COMMERCIAL REPETITION and it was positively related to brand familiarity for the relatively new brand only. Ginter (1974) found that either overall attitude change nor brand choice was affected by the number of message exposures. Null effects of advertising repetition were also found in a study by Mitchell and Olson (1977): repetition of two types of print ads had no effect on belief strength, attitude, or purchase intention. Several studies have examined the effects of multiple exposure in conjunction with varied advertising appeals. Ray and Sawyer (1971) found that repetition of six soft-sell "nongrabber" advertisements produced increases in purchase intention, while intention was not increased by repetition of hard-sell "grabber" ads.

Similar results were found in a study by Silk and Vavra (1974), who examined reactions to hard-sell and soft-sell radio commercials. Gorn and Goldberg (1980) examined the effects of repeated commercial exposure on eight- to ten-year-old boys by varying the number of commercials seen in the

context of a half-hour program. Subjects viewed the commercials either one, three, or five times. However, some of the multiple-exposure condition subjects viewed the same commercial repeatedly, while others saw a different commercial for the new brand each time.

Gorn and Goldberg found that moderate exposure (three repetitions) resulted in the highest level of brand preference, provided that the same commercial was not seen each time. 57 Cacioppo and Petty (1980) tested the viability of the two-stage cognitive response model in two other repetition experiments. In the first experiment, the cognitive response measure and a persisting measure of attitude change (taken one week later) were affected in the curvilinear manner suggested by the two-factor model.

In the second experiment, they predicted and found an interaction between exposure frequency and the nature of the arguments used on a persisting attitude change measure. Strong argument-based messages became more persuasive with repetition; weak argument messages became less persuasive with repetition; and novel messages became more, then less persuasive with repeated exposure. Calder and Sternthal (1980) measured cognitive responses after commercials for two products; one product and was unfamiliar to the participants one was well known.

They found that increased frequency of exposure led primarily to more total thoughts for the unfamiliar product and to an increase in negative thoughts for the well-known product. Theoretical Accounts of Repetition Effects While several theoretical explanations have been offered for repetition effects, the one that appears to be most congenial for advertising message repetition is

some form of Berlyne's (1970) two-factor theory. Berlyne proposed a nonmonotonic inverted U-curve relationship between familiarity and liking.

According to Berlyne, two separate and opposing psychological processes, positive habituation and tedium, operate simultaneously. Positive habituation is similar to a reduction in response competition: exposure results in a reduction in arousal due to uncertainty and conflict and thus increases liking. Tedium also increases with exposure and results in a less pleasurable feeling toward the stimulus. Berlyne suggests that the relative strength of each factor varies as a function of exposure to the stimulus, with the habituation process having the greater impact on affect initially, while tedium and disliking occur at higher exposure levels.

Stimulus complexity and sequence heterogeneity slow the positive habituation process; thus tedium occurs at higher exposure levels for complex, varied stimuli and at a relatively low frequency for simple, nonvaried stimuli. An extension of Berlyne's two-factor theory was proposed by Stang (1973, 1975), who argued that repeated exposure provides more opportunity to learn about the stimulus and that because this learning is rewarding, positive affect results. However, continued repetition beyond that necessary for initial learning leads to boredom or satiation, and repeated exposure ultimately produces negative affect toward the stimulus.

A similar explanation for repetition effects was proposed by Cacioppo and Petty's (1979) two-stage attitude modification model. They argue that repetition of the message provides recipients with more opportunity to elaborate cognitively upon message content and to realize the favorable implications and cogency of the arguments used in the mes- Repetition and
<https://assignbuster.com/effects-of-television-commercial-repetition/>

Cognitive Response McCullough and Ostrom(1974) examined the effects of repeated exposure by having subjects view five similar ads that used the same basic appeal, but differed in the order and phrasing of the message arguments.

Cognitive responses were measured immediately after each exposure to the advertisements. They found that repetition resulted in a significant positive effect on cognitive response activity, as subjects listed more positive thoughts and fewer negative thoughts with repeated exposure. Cacioppo and Petty (1979) examined the effects of repeating messages that were either consistent with or contrary to recipients' initial attitude on cognitive response activity. They found that agreement with the message position increased and then decreased as exposure frequency increased.

The cognitive response pattern followed a similar curvilinear relationship as favorable thoughts showed an increase followed by a decrease, while counterarguments showed a significant decrease followed by an increase. Analysis of the cognitive response measures also revealed that the counter-attitudinal message evoked a greater number of topic-relevant thoughts and fewer neutral or irrelevant thoughts than the proattitudinal message. Cacioppo and Petty interpreted these results in terms of a two-stage attitude modification process.

According to this model, repetition of the message provides more opportunity for cognitive elaboration upon the specific arguments and realization of their favorable implications. At high exposure levels, however, tedium and/or reactance lead to an attack against the message by the receiver. 58

<https://assignbuster.com/effects-of-television-commercial-repetition/>

and/or reactance will develop, leading to a decline in affect. Sawyer (1981) has suggested that Berlyne's two-factor theory is consistent with results concerning the repetition effects of advertising.

Sawyer suggests that advertisements and other persuasive messages in contexts of obvious manipulative intent may elicit a majority of defensive responses—such as counterarguments and source derogations—at the outset. Once expressed, these defensive responses may dissipate and allow other, more objective evaluations and associations to occur. However, high exposure levels would ultimately result in satiation and negative reactions to the message.

The first question of interest is whether the inverted U-curve predictions offered by Berlyne's two-factor theory and Cacioppo and Petty's two-stage attitude modification process model occur with multiple exposures to a television commercial. Most of the studies extant have only examined outcome measures of effectiveness, providing little insight into the cognitive processing that underlies these reactions. The studies that have utilized cognitive response measures have produced divergent results, primarily because of the methodological and procedural differences among them.

It will be difficult to arrive at any generalizations concerning the effects of persuasive message repetition on cognitive processing until more empirical evidence is produced. The first hypothesis to be tested in this study concerns the effects of commercial message repetition on cognitive response and message acceptance: H₁: The favorability of message acceptance and cognitive responses to a television commercial increases

<https://assignbuster.com/effects-of-television-commercial-repetition/>

with moderate levels of exposure, then declines following high levels of exposure. THE JOURNAL OF CONSUMER RESEARCH during the first few exposures to it.

Krugman's (1972) notion of only three message exposures being sufficient to stimulate a buying decision is relevant here. According to Krugman, the very first exposure (defined as actual attention by the consumer) is dominated by a "What is it?" type of response, whereby the message recipient attempts to define and understand the advertising stimulus and to determine whether the message is of any use or interest. Krugman suggests that much of the needed reduction in response competition occurs during this first exposure and that the second exposure evokes a more evaluative and personal "What of it?" reaction, which determines the message's ultimate ability to persuade. If any meaningful response occurred earlier, the third exposure then acts mostly as a reminder to the recipient. The third exposure is also the beginning of disengagement or withdrawal of attention from the task. Krugman suggests that more than three exposures to a message essentially repeat earlier exposure effects. While no direct test of Krugman's conjecture has been conducted, there is indirect evidence that is relevant.

A study by Krugman (1968) of eye movement exploration of print ads indicated that peak effectiveness occurred after two or three exposures, while Grass and Wallace's (1969) work with CONPADD response indicated that from two to four exposures are optimal. Other evidence consistent with Krugman's notion comes from a study by Goldberg and Gorn (1974). Also, Cacioppo and Petty's (1979) finding that topic-irrelevant ideation increased as exposure frequency increased suggests that the

important processing of a message takes place during initial exposures. This review suggests that the strength of the relationship between cognitive responses and message acceptance measures should increase from low to moderate exposure levels, since more detailed and evaluative processing will occur as message recipients become familiar with the commercial message. At higher exposure levels, however, the tedium and/or reactance associated with message satiation would inhibit and/or interfere with subsequent information processing activity and result in a weakening of the relationship between cognitive response and message acceptance. Cognitive processing at higher levels of exposure may consist more than of relevant processing of topic-irrelevant and evaluation of the message arguments.

The following predictions concerning the effects of television commercial message repetition on the relevancy and mediating role of cognitive responses will be examined: H2: The frequency of topic-irrelevant ideation increases as exposure to a television commercial increases. 'CONPADD (Conjugately Programmed Analysis of Advertising) measures attention to commercials by using an operant conditioning procedure whereby subjects operate either a foot or hand device in order to receive the video and audio portions of an advertisement.

The subject's effort thus becomes a measure of interest and attention to the message in either the audio or video mode. Effects of Repetition on the Mediating Role of Cognitive Response Also of concern in this study are the effects of message repetition on the mediating relationship between cognitive responses and message acceptance. The issue of interest here is

whether cognitive responses elicited after high levels of message exposure mediate affective reaction to the message. Most studies of repetition effects have focused on dependent measures, such as recall, attitude, and purchase intention.

In these studies, the cumulative effects that result from repeated exposure to the message may be captured by using these "outcome" measures. However, this may not be the case for cognitive response measures. The detailed processing that truly determines the message recipient's reaction to the message may take place during initial exposure to the advertisement. Theorizing consistent with this position has been offered by several researchers. For example, Leavitt (1974) has suggested a "strong effects" hypothesis, which suggests that the effectiveness of an ad depends on the events oc-

EFFECTS OF TV COMMERCIAL REPETITION H3: The strength of the relationship between cognitive response and message acceptance measures increases with moderate levels of exposure, then decreases at high levels of exposure. 59 thoughts. 3 After completing the cognitive response task, the subjects were asked to complete a program evaluation form and a set of postmeasures concerning issues dealt with in the program. After completing these measures, subjects were asked to respond to dependent measures concerning message acceptance and reception.

Two dependent measures of message acceptance were used in this study: attitude toward using the new brand of toothpaste and purchase intentions for the new brand. Subjects' attitudes were measured on four semantic differential scales (good-bad, wise-foolish, favorable-unfavorable, beneficial-

<https://assignbuster.com/effects-of-television-commercial-repetition/>

harmful). Subjects' responses to the four scales were averaged to arrive at the attitude score used in the analyses. Intention to try the new brand of toothpaste was measured on three semantic differential scales (likely-unlikely, probable-improbable, possible-impossible). The purchase intention measure used in the analyses was calculated by averaging the three scales.

Two measures of message reception were employed. An unaided recall measure was taken by asking the respondents to write down as much as they could remember about what was said in the commercial. The recall score was then formed by counting the number of correct claims for the product listed by the subject. The aided recall measure consisted of six multiple-choice questions about specific points in the commercial.

METHOD Overview
The data for this study were collected as part of a laboratory experiment examining the effects of advertising message structure and repetition on cognitive response and message acceptance (Belch 1981). A 2 x 2 x 3 between subjects design was used with type of message (comparative or noncomparative), message-sidedness (one- or two-sided), and repetition (one, three, or five exposures) as the factors. Commercials for a new, fictitious brand of toothpaste were produced to serve as message stimuli for the study. The basic text for the four commercials is shown in the Appendix. The data used to test the repetition hypotheses were compiled by combining the results for the four treatment groups at each of the three exposure levels.

There were no significant interactions between the message structure factors and exposure frequency for the dependent variables of interest.

Subjects and Procedure The sample consisted of 260 persons recruited from

two church groups in the Los Angeles area. Data collection was spread over 10 evenings during a two-week period. Upon arrival at the research setting, the subjects were given a brief statement concerning the reason for their presence and were then randomly assigned to one of the three experimental treatments being used during that session.

One hundred subjects were assigned to both the one- and the three-exposure conditions, while 60 subjects were assigned to the five-exposure condition. The smaller cell size in the five-exposure condition was due to cost limitations in attaining additional subjects. The subjects were read to the subjects informing them that Instructions they were participating in a research project evaluating the content of television programming and that they would be asked to evaluate an episode of Quincy. The subjects were also told they would be asked questions about the commercials.

The subjects completed the set of premeasures, which included demographic questions, a television viewing profile, and premeasures concerning issues dealt with in the program; the one-hour program containing the stimulus commercial(s) was then shown. Immediately after the program ended, the subjects were read the cognitive response instructions and were given two minutes to list their

Categorization of Cognitive Responses

The cognitive response classification scheme used in this study included three categories of thoughts: product/message evaluations, and source-related evaluations, repetition-related evaluation irrelevant thoughts.

The product/message-related thoughts included the cognitive response categories of counterargument, support argument, source derogation, and

<https://assignbuster.com/effects-of-television-commercial-repetition/>

curiosity thoughts as defined by Wright (1973), as well as the categories of simple disaffirmations and simple affirmations described by Beaber (1975). An additional category, source bolstering, was also used. This categorization is the of positive counterpart source derogation. evaluations included any thought that Repetition-related addressed the fact that the commercial was seen more than one time in the program.

The use of the repetition-related categorization may be useful in analyzing message recipients' reaction to multiple message exposures during a short time period, such as a one-hour program. Other studies of repetition and cognitive response (Cacioppo and Petty 1979; Calder and Sternthal 1980; McCullough and Ostrom 1974) have not distinguished thoughts reflecting reactions to the message per se from thoughts that might be related to multiple exposures to the same message.

The final cognitive response category was the irrelevant category, which in 3 The cognitive response instructions used in this study requested the subjects to list the thoughts that occurred to them while viewing the commercial about the product and their reactions during the commercial to what was said about the product by the advertiser. 2 A complete description of the method employed in this study is available elsewhere (Belch 1981). In the interest of brevity, only a summary will be presented here. 60 cluded those statements that did not reflect any relevant evaluation of the advertising message or of the advertisement itself.

A three-judge panel was used to code the cognitive response protocols. The judges were given operational definitions of the three response categories and were trained in the application of these definitions until each had a good

<https://assignbuster.com/effects-of-television-commercial-repetition/>

of understanding the coding scheme and coding task. The basis for the final rating of each cognition was a modal rating of the three judges. Interjudge reliabilities, calculated for each response category separately, ranged from 0.69 to 0.95.

THE JOURNAL CONSUMER OF RESEARCH

MEAN NUMBERS POSITIVE OF COGNITIVE RESPONSES FOR EACH LEVEL REPETITION OF	2	3	5
Total Negative	1.77	1.5	1.32
Total Product/Message Related Negative	1.04	1.15	0.96
Total Positive	3.87	4.11	3.77
RESULTS			

The first hypothesis concerns the effects of commercial message repetition on the message acceptance measures of attitude and purchase intention and on the cognitive response measures. The mean attitudinal scores for the one-, three-, and five-exposure conditions were 3.87, 4.11, and 3.77, while the mean purchase intention scores were 3.24, 3.60, and 3.33. An analysis of variance performed on the message acceptance measures showed no significant effect of repetition for either attitude or purchase intention, $F(2, 257) = 1.6$ and 0.89 , respectively. The means for the number of favorable and unfavorable thoughts generated by subjects in each of the three exposure conditions are graphed in the Figure. 4 An analysis of variance revealed that the increase in the number of negative thoughts across the three levels of repetition is significant, $F(2, 257) = 9.93$, $p < 0.001$. Pairwise comparisons, using a Scheffe test, indicated that the difference in negative thoughts was not significant between the one- and three-exposure conditions, but was significant between the three and five-exposure conditions ($p < 0.5$). The Figure also shows that favorable thoughts remained relatively constant across the three exposure levels. An analysis of variance for the favorable thoughts measure was

nonsignificant, $F(2, 257) = 0.69$. The results presented above are not supportive of the first hypothesis. The message acceptance measures (attitude and purchase intention) did not show the inverted U-curve relationship predicted by Berlyne's (1970) two-factor theory and Cacioppo and Petty's two-stage attitude modification model.

The cognitive response results also fail to support the first hypothesis because negative thoughts increased across the three levels of exposure, while positive thoughts remained relatively constant. One possible explanation for the increase in the number of negative thoughts across the three levels of repetition is that multiple exposures to the message within the one-hour program may have resulted in satiation and the development of unfavorable thoughts. The favorable and unfavorable thoughts measures were derived by combining those cognitive responses that were positive and negative in valence, respectively.

Thus, favorable thoughts represent the sum of all source bolstering, support arguments, and simple affirmations. Unfavorable thoughts represent the sum of all counterarguments, source derogations, simple disaffirmations, and repetition-related negative comments. The number of unfavorable thoughts increased from 1.15 at 1 exposure to 1.5 at 3 exposures, a significant increase, $F(2, 257) = 10.3, p < .001$. This negative reaction to message repetition could be expressed through negative repetition-related thoughts on the part of multiple-exposure subjects.

To determine whether the increase in negative thoughts across the three levels of repetition was due to the repetition-related thoughts produced by the message recipients, these responses were omitted from the composite of

<https://assignbuster.com/effects-of-television-commercial-repetition/>

unfavorable responses and the effect of repetition on the number of product/message-related negative thoughts was examined. The means for the number of negative product/message-related thoughts are graphed in the Figure. A one-way analysis of variance revealed that these differences in negative product/message-related thoughts were not significant, $F(2, 257) = 0.5$. Thus, the increase in negative thoughts across the three exposure levels was due primarily to the recipients' negative reactions to message repetition, rather than to negative evaluations of message content. Hypothesis two concerns the effect of multiple message exposure on the generation of topic-irrelevant thoughts. Topic-irrelevant thoughts were defined as those responses that do not represent an evaluation of the message arguments or of the advertisement itself. The mean number of irrelevant thoughts for the one-, three-, and five-exposure levels was 0.53, 0.34 and 0.3, respectively. The differences in irrelevant thoughts across the three exposure levels were not significant, $F(2, 257) = 1.99$. Contrary to the second hypothesis, it appears that message recipients in the conditions did remain active in attending multiple-exposure to the commercials, rather than tuning them out and producing cognitions that were unrelated to the message.

Relationship of Cognitive Response to Message Acceptance To examine the relationship of the cognitive responses generated by subjects at the various exposure levels to attitude and purchase intention, several compensatory

EFFECTS OF TV COMMERCIAL REPETITION TABLE I RELATIONSHIP OF COGNITIVE RESPONSE AND MESSAGE RETENTION MEASURES TO MESSAGE ACCEPTANCE BY EXPOSURE LEVEL

Single exposure	Attitude Model 1
-----------------	------------------

Purchase intention Three exposure Attitude Purchase intention Five exposure
 Attitude 61 Purchase intention $Y_2(SA+SB+SA_f) - Y_1(CA SD + SD_f) + Model$
 2 . 327b . 323b . 481 b , 345b . 491 b . 236c $Y_2(SA+SB+SA_f+RRP) - Y_1(CA. +$
 $+ SD_f+ RRN)$ 8 SD Retention Aided recall Unaided recall . 327b . 323b .
 468b , 339b . 522b . 258c . 021 . 086 . 065 . 129 . 014 . 010 . 028 . 159 . 001
 . 121 . 009 . 081 SA_f = Simple Affirmations; SD_f = Simple Disaffirmations;
 RRP = Repetition Related Positive; RRN = Repetition Related Negative; SA =
 Support Arguments; CA = Counterarguments; SD = Source Derogation; SB =
 Source Bolsters. $b_p < 0.01$ $C_p < 0.05$ weighting models (cf. Wright 1973)
 were developed from the cognitive responses. These models, which are
 shown in Table 1, are based on an underlying assumption that message
 recipients process cognitive cues in a manner such that opposing cues linearly
 balance each other. These compensatory models yield a measure of " net
 directional impact" of the cognitive mediators.

Model 1 includes the product/message-related cognitive cues using the
 difference between the amount of positive ideation and negative ideation
 engaged in by the message recipients as the predictor of message
 acceptance. Model 2 adds the repetition-related thoughts to the model and
 incorporates all of the relevant cognitions into the cognitive response index.
 The relationships between the message retention measures (unaided and
 aided recall) and attitude and purchase intention were also examined. Simple
 regressions were performed using each model as a predictor of the message
 acceptance measures.

The results of these analyses, which were performed separately for each
 exposure level, are shown in Table 1. This table shows that the cognitive

response models are significantly related to the message acceptance measures across all three exposure conditions. However, the aided and unaided recall scores are not related to either attitude or purchase intention at any of the exposure levels. As can be seen in Table 1, the relationship of the cognitive response models to the attitudinal measure of message acceptance is stronger in the three-exposure condition than in the single-exposure condition, as predicated.

However, the differences in these correlations for the two exposure levels are not statistically significant ($t = 1.32, p < 0.10$). Table 1 also reveals that the magnitude of the relationship between the cognitive response models and attitude does not show the hypothesized decline between the 5- and 3-exposure conditions. Comparison of these correlation coefficients was made using the following test statistic: three- and five-exposure conditions, but remains relatively constant. The relationship between the cognitive response models and purchase intention across the three exposure levels is also shown in Table 1.

The correlations do not show the predicted increase between the one- and three-exposure conditions. There is an attenuation in the correlations between the three- and five-exposure conditions; however, these differences are not significant ($t < 1$). These results fail to support the hypothesized changes in the relationship between cognitive and message acceptance across the three exposure levels. Table 1 also indicates that differences exist in the relationships between cognitive response and the attitudinal measure of message acceptance and between cognitive response and the purchase intention measure in the multiple-exposure conditions.

There is an attenuation in the correlation of cognitive response to message acceptance when purchase intention, rather than attitude, is the message acceptance criterion. Wright (1973) found a similar attenuation between cognitive response and a behavioral intention versus an attitudinal measure of message acceptance. The attenuation found in this study may be due to the fact that behavioral patterns for a product such as toothpaste are likely to be well developed. Thus, favorable or unfavorable cognitive reactions to the message may be related to affective position toward the new brand, but would not necessarily impact on intention to buy the new brand.

$$t = \frac{V_m - V_f}{\sqrt{\frac{1}{N_m} + \frac{1}{N_f}}}$$
where V_m and V_f denote the correlation coefficients for each group and N_m and N_f denote the size of each group. This statistic makes it possible to test the equality of two correlation coefficients using a t test (Kleinbaum and Kupper 1978). 62 THE JOURNAL OF CONSUMER RESEARCH sage arguments and then developing an attitude toward the new brand, but rather were using the retained arguments to support a preformed affective position.

This explanation may be particularly plausible in a low-involvement advertising situation (which one might argue was the case in this study) where global affect, rather than attribute specific information, provides the basis for consumer evaluation and decision making (cf. Olshavsky and Granbois 1979; Wright 1976; Zajonc 1980). The two perspectives regarding the mediating role of cognitive response suggest different causal patterns among the message acceptance measures and cognitive responses following multiple exposure to a message.

The first explanation argues for the traditional mediating role of cognitive responses, whereby the flow of causal effects originates with repetition and moves through cognitive responses that mediate attitude, which in turn mediates purchase intention. The competing explanation suggests that the flow of effects originates with repetition and moves successively through attitude and purchase intention, which in turn influences cognitive response. This causal flow suggests that cognitive responses, particularly the multiple-exposure conditions, are the result of preformed affect toward the new brand.

To examine the two competing explanations of the relationships among the variables, a testing of alternative model forms was undertaken. The tenability of each causal model was tested by attempting to reproduce the original correlation matrix among the four relevant variables (repetition, cognitive responses, attitude, and purchase intention). Examination of the reproducibility of the original correlation matrix provides evidence in support of a proposed model configuration also allows for a comparison and of other alternative flows.

A technique developed by Simon (1957) for testing simple linear flows of causation was used to examine the relationship among these variables. This technique for testing a proposed causal flow was used by Lutz (1978) in examining the relationships among beliefs, attitude, and behavioral intention—a problem similar to the present one. Simon developed a precise set of predictions for the magnitude of correlation between nonadjacent pairs of variables in the hypothesized flow of causation, based on observed correlations between adjacent pairs of variables.

Specifically, the predicted correlation between any two nonadjacent variables is equal to the product of all the pairwise correlations between adjacent intervening variables. For example, in the traditional cognitive response causal sequence (repetition-- cognitive response-> attitude-> intention), Simon's model would predict that the simple correlation between repetition and intention would be equal to the simple correlation of repetition and cognitive response multiplied by the simple correlation of cognitive response and attitude multiplied by the simple correlation of attitude and intention.

Comparison of predicted and actual correlations provides a measure of "fit" for the theoretical explanations being applied to the data. While this mode of analysis cannot prove that a particular causal sequence is correct, it is useful for testing competing explanations. Cognitive Responses: Mediators or Products of Message Acceptance? A basic assumption in using the cognitive response approach to studying communication effects is that the spontaneous thoughts generated by the message recipients causally mediate affective reactions to a persuasive message.

The assumption that cognitive responses precede and influence the formation of attitudes and intentions has been made in most cognitive response studies and has been directly tested in several investigations (Cacioppo and Petty 1979; Osterhouse and Brock 1970; Petty and Cacioppo 1977). This study assumed that cognitive response cues generated by the message recipients mediate the effect of repetition on message acceptance, since subjects in the multiple exposure conditions had the opportunity to become acquainted with the message arguments and had plenty of time to

elaborate cognitively upon them. Thus, the responses generated by the multiple-exposure condition subjects would be based on the cogency of the message arguments and their reactions to these arguments, rather than on a general, overall impression of the product and/or commercial. Evidence in support of this position is offered by the strong relationship between cognitive response and attitude in the multiple-exposure conditions. There is, however, an alternative hypothesis to the argument that cognitive responses mediate the effect of repetition on message acceptance.

It may be that the thoughts produced by the message recipients are not really mediating acceptance of the message, but rather are a reflection of the recipient's affective position toward the product and/or commercial. Several studies (Tesser and Conlee 1975; Tesser and Cowan 1977) have shown that the opportunity for thought leads to a polarization of attitudes whereby affective position becomes more extreme in the initial direction. Message recipients in the multiple-exposure condition may have formed an attitude toward the new brand after one or two exposures, while further exposure to and reflection upon the message arguments may have led to attitude polarization. Thus, the cognitive responses produced by these subjects may have been a reflection of a previously developed and polarized attitude; rather than mediating message acceptance, the recipients' responses may thus have offered cognitive justification for their affective position.

This alternative perspective suggests that the multiple exposure condition subjects were not processing the mes- 6 There is evidence that the message arguments were retained more in the multiple-exposure conditions than in the single-exposure conditions. The cell means for the unaided recall

measures were 1.70, 2.33, and 2.48, while the means for the aided recall measure were 2.22, 2.74, and 3.20. An analysis of variance performed on the reception scores showed that the effect of repetition was significant for both measures, $F(2, 257) = 7.01$ and 11.25 , respectively ($p < 0.1$). Pairwise comparisons of the cell means, using the Scheffe test, indicated that both recall measures showed a significant increase between the one- and three-exposure conditions ($p < 0.05$), but not between the three- and five-exposure levels.

REPETITION EFFECTS OF TV COMMERCIAL

TABLE 2
INTERCORRELATIONS OF VARIABLES IN HYPOTHESIZED FLOW OF EFFECTS

Cognitive response - 63

TABLE 3 PREDICTIONS AND DEGREES OF FIT FOR RELATIONSHIPS AMONG NONADJACENT CAUSAL VARIABLES

Degrees of fit

Actual Expected Variable Repetition - Attitude - .013 .429 Purchase intention .31

R--CR-> Att-> PI' 1. Repetition 2. Cognitive response 3. Attitude 4. Purchase intention .022 .310 .692

13 12r23 -.013 r12r23r,. r24= r23r, r14= .031 .310 R--Att-> PII-CR -.009 [(-.022)(.429)] - .006 [(-.022)(.429)(.692)] .297 [(.429)(.692)]

In performing this analysis, the cognitive response variable was operationalized by using the compensatory index derived from model 1 (Table 1). Repetition was assigned a value of 1, 3, or 5, depending upon exposure level. Table 2 shows the observed simple correlations among the four variables of interest.

Each variable is numbered to facilitate interpretation Table 3, which shows the actual and expected correlations among nonadjacent pairs of variables for the two competing causal flows previously described. To compare the degrees of fit of the two models, a total discrepancy score was computed from the correlations shown in Table 3. Total discrepancy was

operationalized as the sum of the absolute differences between predicted and actual correlations. Table 3 shows that the degree of fit was best for the traditional model, in which cognitive responses mediate message acceptance.

The total discrepancy for this model was 0.055, while the total discrepancy for the competing model was 0.278. In addition to the two models previously considered, alternative orderings of the cognitive response and message acceptance measures following message repetition were also examined. However, none of these models performed as well as the basic cognitive-responses-as-mediators model. $r_{12} = r_{23} = r_{14} = r_{24} = r_{23r34} = r_{24} = r_{23r34} = .031$
 $-.022 = .429 = -.015 [(-.022)(.692)] = -.005 [(-.022)(.692)(.310)] = .214 [(.692)(.310)]$ intention aRepetitionrCognitive response-Attitude-oPurchase

DISCUSSION The results of this study are not supportive of Berlyne's (1970) two-factor theoretical account of repetition effects nor of Cacioppo and Petty's (1979) two-stage attitude modification process model. Neither attitudes nor purchase intentions were affected by the level of advertising exposure. This is consistent with the results of other repetition studies that have failed to find a significant main effect for repetition on these outcome measures. The pattern of results found for the cognitive response measures was also inconsistent with theoretical expectations.

The number of negative product/message-related thoughts did not decline between the one- and three-exposure conditions, as had been predicted. The negative thoughts variable also failed to parallel the results found for the attitude and purchase intention measures for the one and three-

exposure conditions. This inconsistency, which was also found by Calder and Sternthal (1980) and, to a lesser degree, by Cacioppo and Petty (1980), suggests that there is not always a direct correspondence between cognitive response and outcome evaluations.

The second stage of two-factor theory and the two-stage attitude modification process, which predicts a decrease in affect and an increase in negative thoughts due to tedium and reactance, was partially supported. Neither attitudes nor purchase intentions showed a significant decline between the three- and five-exposure conditions. However, the significant increase in negative repetition-related thoughts between the three- and five-exposure conditions suggests that reactance to the multiple message exposures did become more pronounced in the high exposure condition.

The significant increase in repetition-related thoughts across the three exposure levels is not surprising, but it is noteworthy. Past studies of repetition and cognitive response have not directly recognized the possibility that repetition-related cognitions might occur as a result of excessive exposure to a message; instead, they have assumed that the recipient's reaction to message repetition impacts on more traditional cognitive response variables, such as or counterarguments favorable message-related thoughts. From a strategic perspective, these findings have implications for the scheduling of advertising messages, particularly over short time periods. While the exposure levels used in this study were high for a one-hour time period, they are not totally inconsistent with actual media scheduling practices. The results suggest that no short-term is gained

from added exposures. Media schedules that result in high levels of message exposure in a limited time period run the risk of alienating the viewer and may not represent. Although cognitive response measures were not taken in the study by Gom and Goldberg (1980), they did find negative repetition-related reactions to be commonplace: "Observation of the children suggested that when exposed to the same commercial three or five times, they became annoyed by the repetitions. Remarks such as "Oh no, not again" or "not another one" were common (p. 424). "64 the most effective expenditure of media budgets.

However, rather than focusing only on immediate postexposure reactions, it would be helpful to consider the effects of multiple message exposure over longer time periods, in order to determine the persistence of positive or negative responses. Crandall, Harrison, and Zajonc (1975) found that the negative effects of tedium from repeated exposures may be only transitory, whereas the positive effect is permanent. Stang (1974) also found satiation effects to be short-lived: a small measurement delay was more likely to show positive effects of exposure than an immediate measurement.

Research similar to that of Cacioppo and Petty (1980), which uses delayed measures of cognitive response and the attitude change, is needed to fully understand effects of message repetition. The use of delayed response measures in examining repetition effects is discussed in detail by Sawyer and Ward (1977). The results of this study are supportive of other investigations suggesting that cognitive responses mediate postmessage attitudes and purchase intentions. Moreover, this study offers

further support for the viability of using thought verbalization data in studying communication effects.

While the cognitive response models were capable of explaining a significant amount of the variance in attitude and purchase intention, the aided and unaided recall measures did not show a significant relationship to message acceptance despite the increase in recall scores across the three levels of exposure. These findings are consistent with other studies which have found that stimulus learning is not necessarily related to affective reactions (Cacioppo and Petty 1979; Greenwald 1968; Wright 1973).

These results support the argument that cognitive cues generated by the message recipient, rather than message arguments, are the primary mediators of message acceptance. [Received May 1981. Revised November 1981.]

RESEARCH THE JOURNAL OF CONSUMER REFERENCES Beaber, R. J. (1975), "The General Characteristics of Covert Resistance Mechanisms and Their Relationship to Attitude Change and Speaker Perception," Unpublished doctoral dissertation, Department of Psychology, University of Southern California. Belch, George E. (1981), "An Examination of Comparative and Noncomparative Television Commercials: The Effects of Claim Variation and Repetition on Cognitive Response and Message Acceptance," *Journal of Marketing Research*, 18 (August): 333-49. Berlyne, D. E. (1970), "Novelty, Complexity, and Hedonic Value," *Perception and Psychophysics*, 8: 279-86. Cacioppo, John T., and Petty, Richard (1979), "Effects of Message Repetition and Position on Cognitive Response, Recall and Persuasion," *Journal of Personality and Social Psychology*, 37 (January): <https://assignbuster.com/effects-of-television-commercial-repetition/>

and Petty, Richard, (1980), " Persuasiveness of Communications is Affected by Exposure Frequency and Message Quality: A Theoretical and Empirical Analysis of Persisting Attitude Change," in Current Issues and Research in Advertising, eds. J. H. Leigh and C. R. Martin, Jr. , Ann Arbor: Division of Research, Graduate School of Business Administration, University of Michigan. Calder, Bobby J. and Sternthal, Brian (1980), " Television Commercial Processing View, " Journal of Commercial Wearout: An Information of Marketing Research, 17 (May): 173-186. Craig, C.

Samuel, Sternthal, Brian, and Levitt, Clark (1976), Analysis," Journal of Advertising Wearout: An Experimental of Marketing Research: 13 (November): 365-72. Crandall, R. , Harrison, A. A. , and Zajonc, Robert B. (1975), " The Permanence of the Positive and Negative Effects of Stimulus Exposure: A Sleeper Effect? ," Unpublished manuscript, University of Southern California. Ginter, James L. (1974), " An Experimental Investigation of Attitude Change and Choice of a New Brand," Journal of Marketing Research, 11 (February): 30-7. Goldberg, Marvin E. , and Gorn, Gerald J. 1974), " Children's Reactions to Television Advertising: An Experimental Approach," Journal of Consumer Research, 1 (September): 69-75. Gorn, Gerald G. , and Goldberg, Marvin E. (1980), " Children's Responses to Repetitive TV Commercials," Journal of Consumer Research, 6 (March): 421-25. Grass, R. C. , and Wallace, Wallace H. (1969), " Satiation Effects of T. V. Commercials," Journal of Advertising Research, 19: 47-57. Greenwald, A. G. (1968), " Cognitive Learning, Cognitive Response to Persuasion and Attitude Change," in Psychological Foundations of Attitudes, eds.

A. G. Greenwald, T. C. Brock, and T. M. Ostrom, New York: Academic Press. Kleinbaum, David G. , and Kupper, Lawrence L. (1978), Applied Methods, North Regression Analysis and Other Multivariable Scituate, MA: Duxbury Press. Krugman, Herbert E. (1962), " An Application of Learning Theory to TV Copy Testing," Public Opinion Quarterly, 26: 626-34. (1965), " The Impact of Television Advertising: Learning Without Involvement," Public Opinion Quarterly, 30: 583-96. (1968), " Processes Underlying Exposure to Advertising," American Psychologist, 23: 11-14.

APPENDIX Sample Text of Commercial Messages Announcing an important advance in the science of dental hygiene, new Shield toothpaste with fluorigard. Fluorigard is a new stannous fluoride substance developed by a bio-dental team at a leading university. Clinical tests by the American Dental Association have found new Shield to be more effective than Crest, the leading fluoride toothpaste, in reducing cavities. These tests showed that Shield, with its patented fluorigard formula, has significantly higher levels of fluoride activity than Crest.

This means that Shield spreads faster while you brush, actually penetrating and cleaning in between your teeth, where most cavities occur. And Shield's fluorigard formula was also preferred in taste tests. Remember, see your dentist regularly and brush often with new Shield, the only toothpaste that gives your teeth the protection of fluorigard. REPETITION EFFECTS OF TV COMMERCIAL (1972), " Why Three Exposures May Be Enough," Journal of Advertising Research, 12: 11-14. Leavitt, Clark (1974), " Strong Versus Weak Effects of Mass Communications: Two Alternative Hypotheses," in Buyer Information Processing, eds.

G. D. Hughes and M. L. Ray, Chapel Hill, NC: University of North Carolina Press. Lutz, Richard J. (1978), "A Further Examination of Two Laboratory Tests of the Extended Fishbein Attitude Model: Rejoinder," *Journal of Consumer Research*, 4 (March): 266-271. McCullough, J. L. , and Ostrom, Thomas (1974), "Repetition of Highly Similar Messages and Attitude Change," *Journal of Applied Psychology*, 59 (June): 395-7. Mitchell, Andrew, and Olson, Jerry C. (1977), "Cognitive Effects of Advertising Repetition," in *Advances in Consumer Research*, Vol. 4, ed. W. D.

Perreault, Atlanta, GA: Association for Consumer Research, pp. 213-20. Olshavsky, Richard W. , and Granbois, Donald (1979), "Consumer Decision Making-Fact or Fiction," *Journal of Consumer Research*, 7: 331-33. Osterhouse, R. A. , and Brock, Timothy C. (1970), "Distraction Increases Yielding to Propaganda by Inhibiting Counterarguing," *Journal of Personality and Social Psychology*, 15: 344-358. Petty, Richard E. , and Cacioppo, John T. (1977), "Forewarning, Cognitive Responding, and Resistance to Persuasion," *Journal of Personality and Social Psychology*, 35: 645-55.

Ostrom, Thomas M. , and Brock, Timothy C. (1981), *Cognitive Responses in Persuasion*, Hillsdale, NJ: Erlbaum. Ray, Michael L. , and Sawyer, Alan G. (1971), "A Laboratory Technique for Estimating the Repetition Function for Advertising Media Models," *Journal of Marketing Research*, 8: 20-29. Sawyer, Alan G. (1973), "The Effects of Repetition of Refutational and Supportive Advertising Appeals," *Journal of Marketing Research*, 10 (February): (1977), "Repetition and Affect: Recent Empirical and

Theoretical Development," in *Foundations of Consumer and Industrial Buying Behavior*, eds. A. G. Woodside, J. N. Sheth, and P. D. Bennett, New York: <https://assignbuster.com/effects-of-television-commercial-repetition/>

AmericanElsevier. (1981), " Repetition, Cognitive Response and Persuasion," in Cognitive Responses in Persuasion, eds. R. E. Petty, T. Ostrom, and T. Brock, Hillsdale, NJ: Erlbaum, pp. 237-61. 65 , and Ward, Scott (1979), " Carry-OverEffects in Advertising Communication," in Research in Marketing, Vol. II, ed. J. N. Sheth, Greenwich, CT: JAI Press, pp. 259-314. Silk, Alvin J. , and Vavra, J. G. 1974), " The Influence of Advertising's Affective Qualities on Consumer-Response," in Processing, eds. G. D. Hughes Information Buyer/Consumer and M. L. Ray, Chapel Hill, NC: University of North Carolina Press, pp. 157-86. Simon, H. A. (1957), Models of Man, New York: John Wiley & Sons, Inc. Stang, D. J. (1973), " Six Theories of Repeated Exposure and Affect," Manuscript#482, JSAS Catalog of Selected Documents in Psychology, 3: 126. (1975), " The Effects of Mere Exposureon Learningand Affect," Journal of Personality and Social Psychology, 31: 7-13.

Tesser, A. , and Conlee, M. C. (1975), " Some Effects of Time and Thought on Attitude Polarization," Journal of Personality and Social Psychology, 31: 262-70. , and Cowan, C. L. (1977), " Some Attitudinaland Cognitive Consequences of Thought," Journal of Research in Personality, 11: 216-26. Winer, B. J. (1971), Statistical Principles in ExperimentalDesign, New York: McGraw-HillBook Co. Winter, FredrickW. (1973), " A LaboratoryExperimentof Individual AttitudeResponse to AdvertisingExposure," Journal of MarketingResearch, 10 (May): 130-40. Wright, Peter L. 1973), " The Cognitive Processes Mediating Research, Acceptanceof Advertising," Journal of Marketing 53-67. 10 (February): (1975), " Factors Affecting Cognitive Resistance to Advertising," Journal of ConsumerResearch, 2 (June): 1-10. (1976), " An Adaptive Consumer'sView of Attitudesand Other Choice

Mechanisms, as Viewed by an Equally Adaptive Advertiser," in AttitudeResearch at Bay, eds. Deborah Johnson and William D. Wells, Chicago American Marketing Association, pp. 113-31. (1980), " Message- Evoked Thoughts: Persuasion ResearchUsing ThoughtVerbalizations," Journal of Consumer Research, 2